

Howework 1 – Advanced Java Programming

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1 Exercise A

- 1: True
- 2: False (Required only if the class implements Comparable)
- 3: True
- 4: False (== for objects checks for reference equality)
- 5: False (it is indeed implemented by default - i.e. in Object, but the default implementation checks reference equality only)
- 6: False (a child class of Tiger may include additional fields that are mutable. However, all properties and behaviour accessible via a reference of Tiger type is immutable)
- 7: False (the class is not public)
- 8: False (classes in the same package can read the name field)
- 9: True (the constructor to implement must explicitly call Tiger's constructor with super)
- 10: False (the declared type is Number, the runtime type is Integer)

2 Exercise B

- 1: False (the only 'collection' data structure based over an unboxed primitive type is the array)
- 2: True (if the hashCode() return value changes after the mutation then the implementation of hashMap is unable to recognize it was inserted previously)
- 3: True
- 4: True
- 5: False (finally blocks are always evaluated)

3 Exercise C

- 1: True
- 2: False
- 3: True
- 4: True (more precisely, double dispatch or 'virtual table' invocations are used only for invoking the method in the class matching the object's dynamic type)
- 5: True (as the method called depends on the runtime or dynamic type of the caller object)